

Work Order ID 99392

99392

Page 1

April-05-13 1:25:03 PM

Item ID: D2580-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: 205 Bent Tube

Start Date: 4/23/13 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/23/13 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-04-05 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D2580	E
-------	---

100

0.00

100

Skid tubes

Memo

0.00

Skid tubes

1- Inspect mat'l D2500-1-190 for damage.

2-Drill pilot holes using drill jig DT 8149 A-BC-D

3-Open holes to 0.508" as per Dwg D2580

4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube

5- Test fit inspection saddles on FWD & AFT saddle holes.

> CF 13-4-9

> SAD 13-04-09

101

QC6- Inspect dimensions to drawing

0.00

101

QC

Memo

0.00

Quality Control

SMD
1349

6

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab. <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab. <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab. <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not C	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Distorted/Unpiped	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 99392

April-05-13 1:25:03 PM

99392

Page 2

Item ID: D2580-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: 205 Bent Tube

Start Date: 4/23/13 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/23/13 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Chemical Conversion Coat per QSI005 4.1	0.00							
110									
HandFinish	Memo	0.00				(b)	SAD	13-04-09	
Hand Finishing									
120	QC7-Inspect Chemical Conversion Coat	0.00							
120									
QC	Memo	0.00				(b)	Ø	13/04/09	DAS 18
Quality Control									
125		0.00							
125									
Skidtubes	Memo	0.00				(b)	Ø	CF 13-49	
Skidtubes	1- Bond web in place per QSI 015.								

A/R Sikaflex-291 batch: M124958
 Sikaflex expire date: 01-10-2013
 Start time and date: 14:30 bond for 12hrs
13-4-9

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Skid-tube <input type="checkbox"/></td> <td style="width: 33%;">Crosstube <input type="checkbox"/></td> <td style="width: 33%;">Water Jet <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Other <input type="checkbox"/></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>			Engineering <input type="checkbox"/>			Quality <input type="checkbox"/>			Other <input type="checkbox"/>
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>																					
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>																					
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>																					
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																					
		Engineering <input type="checkbox"/>																					
		Quality <input type="checkbox"/>																					
		Other <input type="checkbox"/>																					

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 99392

99392

Page 3

April-05-13 1:25:03 PM

Item ID: D2580-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: 205 Bent Tube

Start Date: 4/23/13 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/23/13 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

6 0 13-03-10
09



140

Identify as per dwg & Stock Location: LG

0.00

140

Packaging

Memo

0.00

Packaging

6 0 CF 13-4-10

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

13/4/16

mk
13-4-16

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

Picklist Print

April-05-13 1:25:02 PM

Page 1

Work Order ID: 99392

Parent Item: D2580-1

Parent Item Name: 205 Bent Tube

Start Date: 4/23/13

Required Date: 4/23/13

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP B01.11.08 Revised Step 9, 10, 12, and 13. SM DD ver:ec IPP Rev:C 10.12.01 as per DEO D1

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190 Ext'n -1' Beam Tube 4"		Manufactured	No			100	Each	69.0000	1	6		CF 13-4-9	

Location

Loc Qty

Loc Code

HALL

69

85483

15

91816

54

6

D2596

Web, 205 Skidtube

Manufactured

No

100

Each

9.0000

1

SAD

13-04-09

Location

Loc Qty

Loc Code

LG

9

80820

1

95599

2

98957

6

B98957
B99320

2
1

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

LIST OF MATERIALS					
ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

DEO ATTACHED

RELEASED
2011-08-29

SIDE COPY
RETRACTED
ENCLOSURE
UNCONTROLLED COPY
SUBJECT TO AGREEMENT

WITH FINANCE
WORK ORDER

NO. 99392 M25

13-04-05

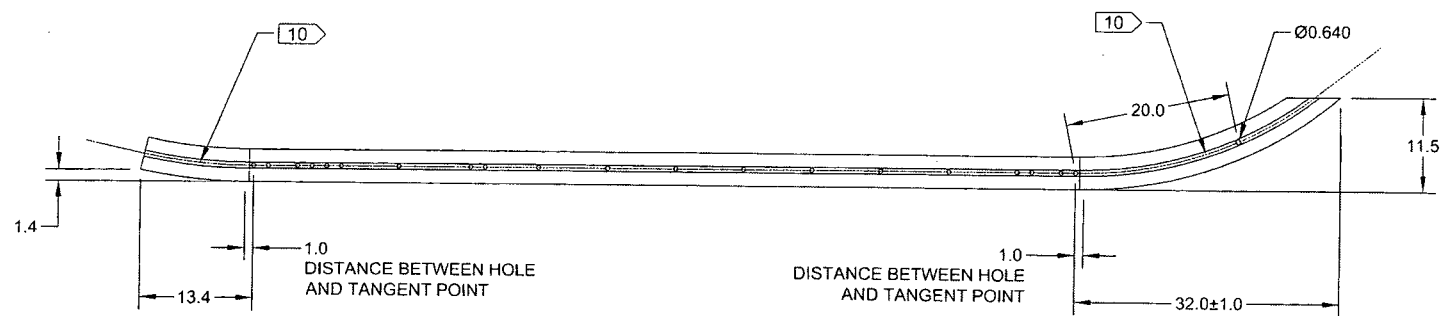
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#		
DRAWN	RF		
CHECKED	#		
MFG. APPR.	#		
DE APPR.	#		
DATE	11.06.21		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. E
D2580 SHEET 1 OF 8
TITLE SCALE
205 SKIDTUBE ASSEMBLY NTS

COPYRIGHT © 1996 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD

99392



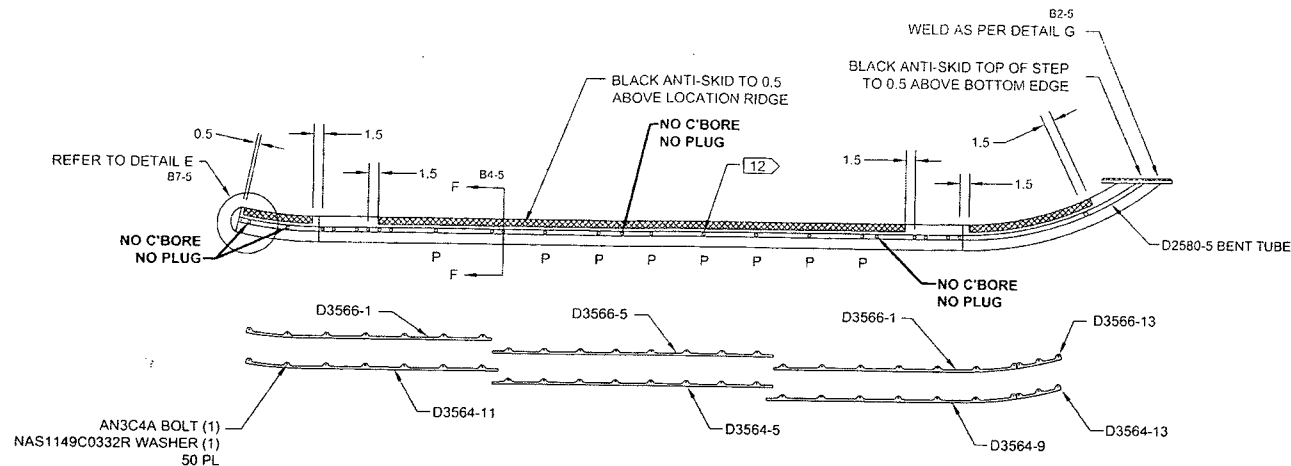
D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

RELEASED
2011-08-28
JW

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 3 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

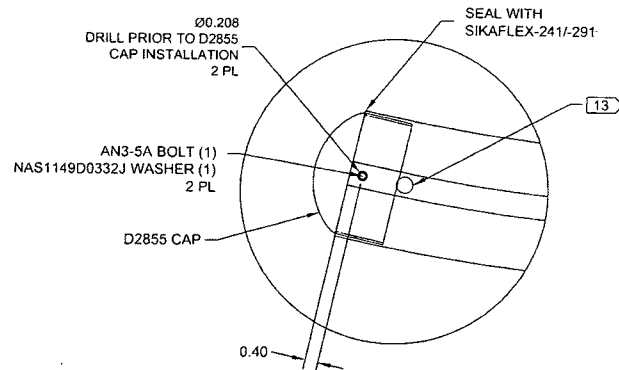
99392



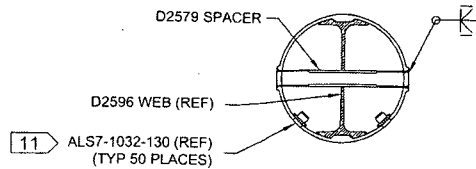
D2580-045 ASSEMBLY DETAIL

DEO ATTACHED
RELEASED
R 2011-08-28
W

DETAIL E D7-5
SCALE 5X

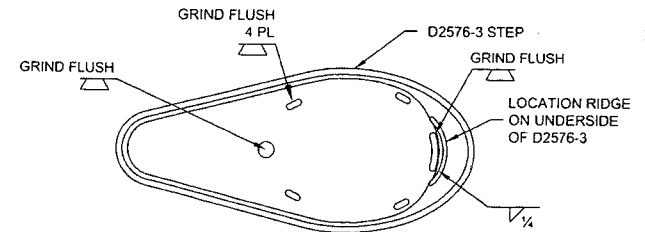


SECTION F-F D5-5
SCALE 5X



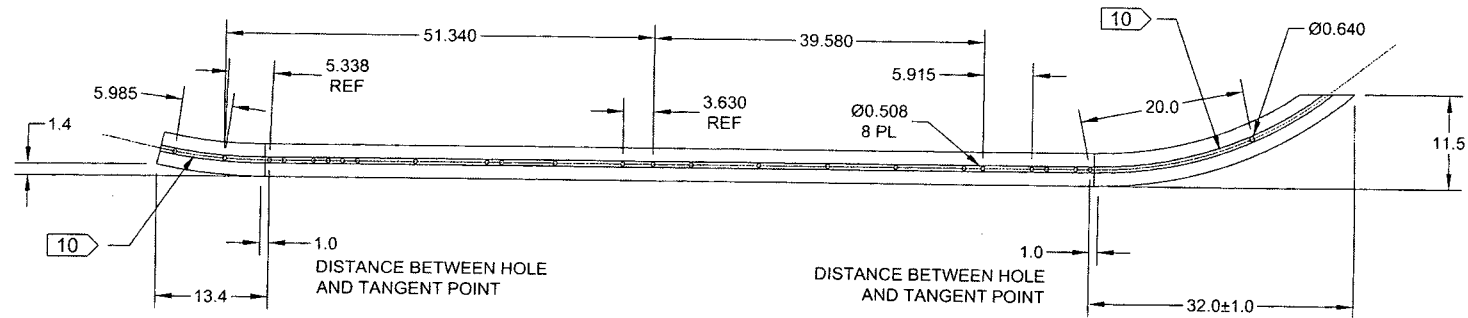
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (24 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL G D3-5
SCALE 5X



DESIGN	<i>4</i>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>140</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>140</i>	D2580	SHEET 4 OF 8
APPROVED	<i>140</i>	TITLE	SCALE
DE APPR.	<i>4</i>	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1986 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

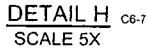
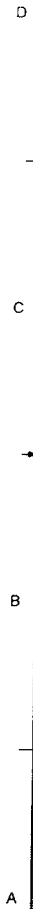
99392



D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED
RELEASED
2011-08-29

DESIGN	140	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	140	DRAWING NO.	REV. E
MFG. APPR.	140	D2580	SHEET 5 OF 8
APPROVED	140	TITLE	SCALE
DE APPR.	140	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1995 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



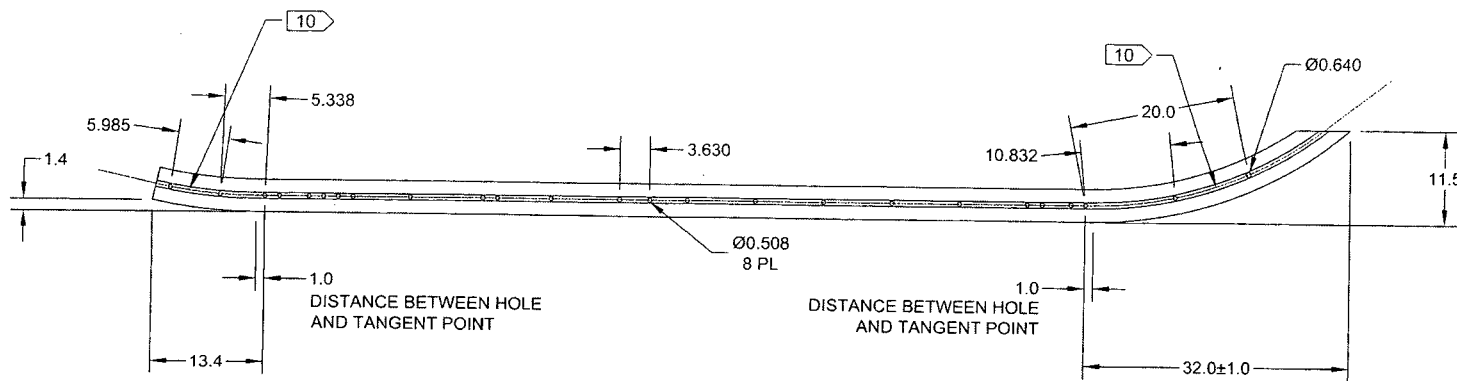
DETAIL J D3-7
SCALE 5X



DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT NOT BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

99392



D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE)

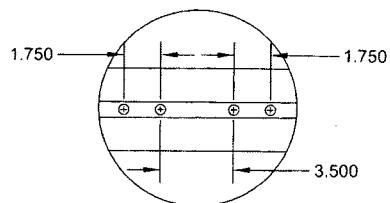
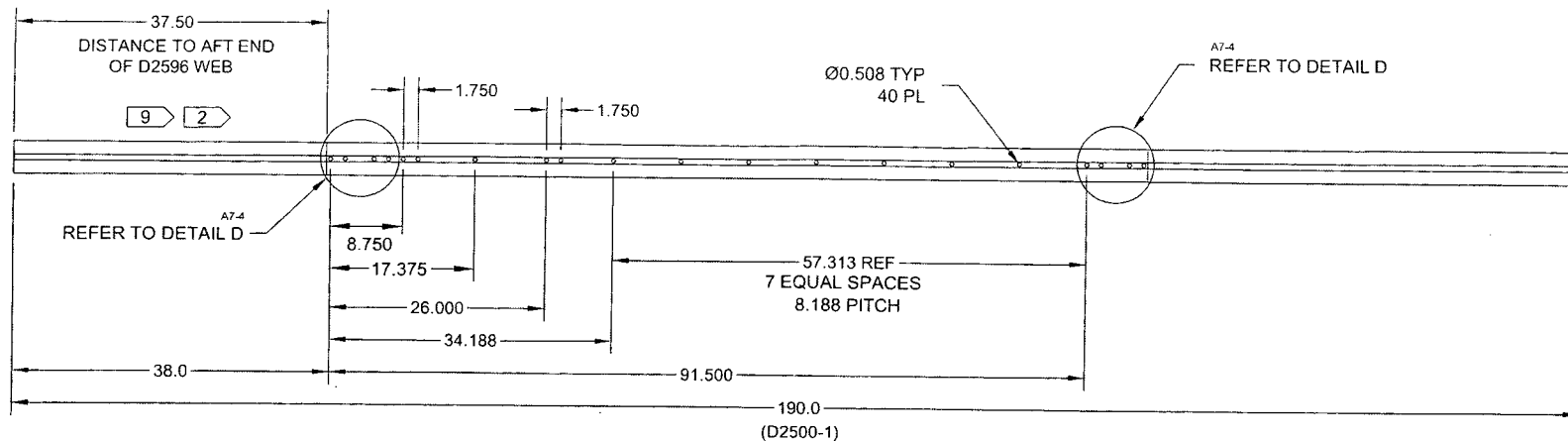


DEO ATTACHED

RELEASE
2011-08-29

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	RF	D2580	SHEET 7 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

99392



DETAIL D 03-4
SCALE 5X C7-4

D2580-101 TUBE

DEO ATTACHED
RELEASED
2011-08-29

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 8 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

99392

DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. E	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D2580-E-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>EC</i>	APPROVED <i>#</i>	DE APPR. <i>#</i>		
DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

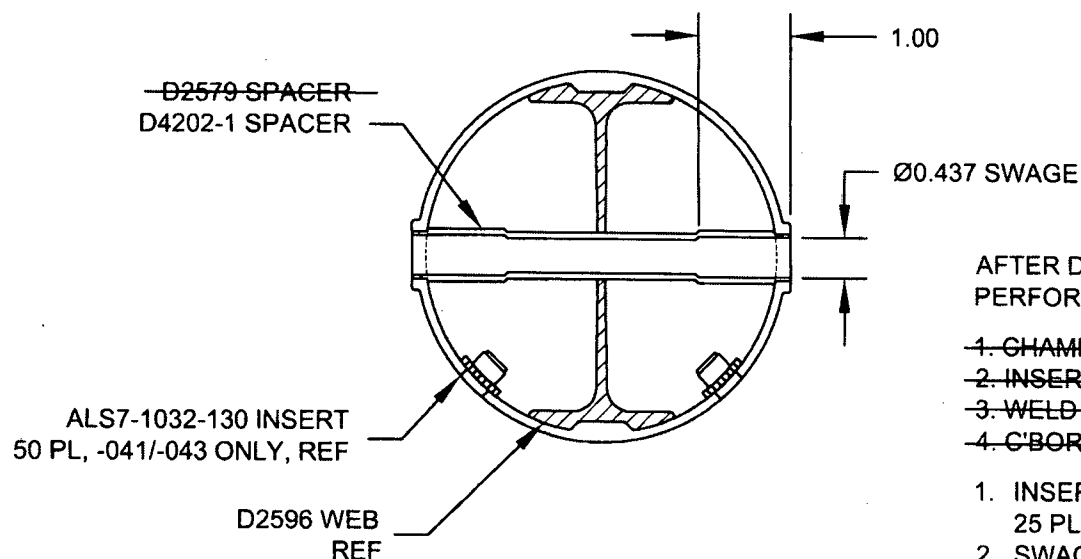
WAS

QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045	-047		
20	24	25	D2579	CROSS BOLT SPACER

IS

	4		* D2579	CROSS BOLT SPACER
20	20	25	D4202-1	SPACER

SECTION B-B, SECTION F-F, & SECTION I-I ARE AMENDED AS FOLLOWS FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

*** FOR -045 SKIDTUBE ONLY:**WELD 4X D2579 SPACERS PER DWG
IN LOCATIONS MARKED "NO C'BORE".
REF SHEET 4 OF DWG.RELEASED
2011-12-14AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 20 PL (-045) OR 25 PL (-047)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION B-B, F-F, I-I
NOT TO SCALE

